

## Claims

1. Method for monitoring a space, in particular, the vicinity of an automotive vehicle, for the presence of a foreign body (200), in particular, an obstacle, using a monitoring device (100) which comprises at least one transmitter (110-1) and at least a first (110-2) and a second (110-4) receiving device, wherein the second receiving device (110-4) is spaced further apart from the transmitter (110-1) than the first receiving device, the method comprising the following steps:

receiving at least one second received signal from the second receiving device (110-4), characterized by preferably repeated evaluation of at least one part of the second received signal for parasitic signal portions which indicate the presence of a parasitic signal source in the space (step S5); and

monitoring or evaluating the monitoring result only when no parasitic signal portion has been detected in the second received signal (steps S6, S10).

2. Method according to claim 1, characterized in that the part of the second received signal evaluated for the detection of the parasitic signal portions is received before a threshold time represented by the spatial distance between the second receiving device and the transmitter.
3. Method according to any one of the preceding claims, characterized in that the space is monitored or the monitoring result is evaluated only after lapse of a predetermined stop time after a last detection of

parasitic signal portions on the basis of the then instantaneous second received signal (step S9).

4. Method according to claim 3, characterized in that the stop time is fully reset for each repeated detection of parasitic signal portions.
5. Method according to either one of the claims 1 or 2, characterized in that the space is monitored or the monitoring result is evaluated only when no parasitic portions have been detected in a predetermined number of repeated evaluations of the second received signal (step S9).
6. Method according to any one of the preceding claims, characterized in that the detection of the foreign body comprises the following steps (which are preferably repeated):

transmitting a transmission signal via the transmitter (110-1) into the space at a transmitting time (S2);  
 receiving a first received signal by the first receiving device (110-2) and a second received signal by the second receiving device (110-4) (S3); and  
 evaluating at least the first received signal for the presence of a foreign body (200) in the space, wherein the foreign body is optionally represented by portions of the transmission signal reflected from the foreign body in at least one of the received signals (S4).

7. Method according to any one of the preceding claims, characterized in that the monitoring device (110) comprises several transmitters (110-1) each with at least one first (110-2) and one second (110-4) associated receiving device, the individual transmitters and their

associated receiving devices being preferably alternately activated in cycles for the individual repetitions of detection of the foreign body (200) or evaluation of the second received signal.

8. Computer program including program code for a monitoring device (100), characterized in that the program code is designed to perform the method according to any one of the claims 1 through 7.
9. Data carrier comprising the computer program of claim 8.
10. Monitoring device (100) for monitoring a space, in particular, the vicinity of a vehicle for the presence of a foreign body (200), in particular, an obstacle, comprising:

at least one transmitter (110-1) for transmitting a transmission signal into the space at at least one transmitting time;

at least one first receiving device (110-2) for receiving a first received signal and a second receiving device (110-4) for receiving a second received signal, wherein the second receiving device (110-4) is spaced further apart from the transmitter (110-1) than the first receiving device (110-2);

a first evaluation means (120) for evaluating the at least first received signal for the presence of a foreign body (200) in the space, characterized by a second evaluation means (130) for preferably repeated evaluation of at least a portion of the second received signal for parasitic signal portions which indicate the presence of a parasitic signal portion in the space; and

a control means (140) for activating the at least first evaluation means (120) or for releasing the monitoring result

concerning the presence of a foreign body only when the second evaluation means (130) has detected no parasitic signals in the second received signal.

11. Monitoring device according to claim 10, characterized in that the second receiving device (110-4) is designed to receive signals which are physically similar to or physically different from those of the first receiving device.
12. Monitoring device according to either one of the claims 10 or 11, characterized in that the transmitter and/or receiving devices are at least partially formed as part of a transformer means which can optionally be operated as a transmitter or receiving device.